Six minute walk test

Dr Refsgaard and Dr Hager have commented our article regarding 'Six minute walk test' (6MWT). We concluded that '6MWT is a simple and inexpensive test, which is not robust enough to evaluate treatment effects in clinical trials. However, it may have a role in clinical practice as a routine part of evaluation (as many patients avoid symptoms by reducing their activity). A recently published trial on 1077 elderly heart failure patients shows that change in symptoms correlates with change in 6MWT walking distance. The corridor walk test is limited by some very practical consideration such as the length of a quiet corridor where the patient’s performance will not be affected by the staff. We agree that encouragement should be administered, not only for improving patients performance on 6MWT, but also to comfort the patient who might find it awkward to walk in silence for 6 min. Standardization of encouragement may be of value. The value of repeated baseline walk tests is disputed. In the statement issued by the American Thoracic Society (ATS) regarding execution of the 6MWT change in walk length from first to second walk varied from 0 to 17% in a variety of diseases including chronic heart failure, and the authors concluded repeated baseline tests to be unnecessary in most settings. Indeed, 6MWT has proven to yield equally stable results regardless of repeated walk tests.

Ultimately, the 6MWT can be of use in the clinical setting and in evaluating treatment in selected heart failure patients, but in order to ascertain comparable and reliable results there is a need for further standardization. We agree with Dr Hager that the statement issued by ATS can provide the framework for this.

Regarding peak oxygen uptake as the 'golden standard' of heart failure assessment we must respectfully disagree with the author. Peak oxygen uptake has in our opinion, with the exception of patients eligible for heart transplant, not outperformed 6MWT, neither as a prognostic indicator nor in the evaluation of treatment and is more expensive to use and more cumbersome for the patient.

Conflict of interest: none declared.

References

1. Refsgaard J. ‘This is a walking test, not a talking test’: the six minute walking test in congestive heart failure. *Eur Heart J* 2005; 26:749–750.

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Six minute walk test: reply

I want to thank the Editor for giving me the opportunity to answer the letter by Dr Swedberg *et al.* First of all I have to say that as an author it was difficult to discuss the article by Ingle et al. as it was not published when my Editorial was submitted to The European Heart Journal. However, in the article by Ingle *et al.*, the six minute walk test (6MWT) distance is shown to be sensitive to changes in self-perceived symptoms of heart failure. Moreover, the 6MWT test shows satisfactory agreement when repeated 1 year later in 74 patients with congestive heart failure and with unchanged symptoms [intraclass correlation coefficient (ICC) = 0.80 (95% CI = 0.69–0.87)] performed in a 15 m long corridor. What the ICC would have been if the 6MWT had been repeated is unknown from this study, and whether an ICC of 0.80 is an argument for not repeating the test, can be discussed.

Dr Swedberg *et al.* also refer to the work by Demers *et al.* They assessed the 6MWT in 768 patients with heart failure (NYHA II–IV) at baseline, after 18 and 43 weeks in the RESOLVD study, and they found a high reproducibility from screening to baseline (baseline 3 weeks after screening) (ICC= 0.90), after 18 weeks (ICC= 0.88) and 43 weeks (ICC= 0.91). However, in the study by Demers *et al.*, they did not compensate for changes in the patients clinical conditions over time, which is important as shown and discussed by Ingle et al. I think that a variance in distance from 0 to 17% from the first to the second walk as noticed by Dr Swedberg *et al.* in their letter is important enough to attempt to minimize, for example by repeating the test as shown by Guyatt *et al.* And why not, when you have this simple, safe, and inexpensive method? I am therefore still convinced that if the 6MWT is performed in a strict standardized manner in an uncrowded area with a well-prepared instruction without encouragement of the patient during the test, then the test will give valid supplementary information on the treatment effect and the physical status of the patient. The test should be standardized in a strict manner, however, further standardization to make the test more reliable is most welcome.

Finally, I fully agree with Dr Swedberg *et al.*, that the peak oxygen uptake is not a ‘golden standard’ of heart failure assessment, which I have never stated it.

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